

CLAIMS

What is claimed is:

1. A method for generating a simulated network, the method
5 comprising:
 - receiving a network topology generated at a graphical user interface by a user, wherein the network topology comprises a plurality of devices and at least one connection; and
 - automatically generating a build file describing the simulated network

10 based on the network topology.
2. The method as recited in Claim 1 wherein the automatically generating the build file comprises:
 - accessing characteristics for at least one device of the plurality of devices, the characteristics including static information for the device;
 - accessing a neighbor discovery protocol table for the device, the neighbor discovery protocol table including connection information for the device; and
 - compiling the static information and connection information into the build

20 file.
3. The method as recited in Claim 2 wherein the automatically generating the build file further comprises repeating the accessing the

characteristics, the accessing the neighbor discovery protocol table, and the compiling for the plurality of devices.

4. The method as recited in Claim 1 wherein the plurality of devices
5 comprises routers and switches.

5. The method as recited in Claim 2 wherein the static information comprises the device type, the device operating system version and the device interface information.

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6. The method as recited in Claim 5 wherein the connection information of the neighbor discovery protocol table comprises identification of a neighbor device for an active interface of the device.

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7. The method as recited in Claim 1 wherein the build file is text file.

8. The method as recited in Claim 1 wherein the build file is for use by a network management simulator to simulate a network.

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9. A computer-readable medium having computer-readable program code embodied therein for causing a computer system to perform a method of for generating a simulated network using a graphical user interface, the method comprising:

receiving a device selection and placement location for a plurality of devices at the graphical user interface;

receiving at least one connection between devices of the plurality of devices at the graphical user interface; and

5 automatically generating the simulated network describing the network based on the plurality of devices and the connection.

10. The computer-readable medium of Claim 9 wherein the automatically generating the simulated network comprises:

10 accessing characteristics for at least one device of the plurality of devices, the characteristics including static information for the device; accessing a neighbor discovery protocol table for the device, the neighbor discovery protocol table including connection information for the device; and

15 compiling the static information and connection information into a build file representing the simulated network.

11. The computer-readable medium of Claim 10 wherein the automatically generating the simulated network further comprises repeating

20 the accessing the characteristics, the accessing the neighbor discovery protocol table, and the compiling for the plurality of devices.

12. The computer-readable medium of Claim 9 wherein the plurality of devices comprises routers and switches.

13. The computer-readable medium of Claim 10 wherein the static
5 information comprises the device type, the device operating system version and the device interface information.

14. The computer-readable medium of Claim 13 wherein the connection information of the neighbor discovery protocol table comprises
10 identification of a neighbor device for an active interface of the device.

15. The computer-readable medium of Claim 10 wherein the build file is text file.

15 16. The computer-readable medium of Claim 9 wherein the simulated network is for use by a network management simulator to simulate a network to a network management system.

17. An apparatus for use in generating a simulated network, the
20 apparatus comprising:
a first display region for displaying a plurality of icons, an icon associated with a respective device, the first display region for presenting icons for user selection thereof;

a second display region for displaying icons selected from the first display region and for receiving user drawn connections between the icons; and

5 a compiling element for automatically generating a simulated network
based on the selected icons and the connections in response to a user selection.

18. The apparatus of Claim 17 further comprising a cloning element for cloning a grouping of user-selected icons and connections.

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19. The apparatus of Claim 17 wherein the simulated network is generated based on characteristics and neighbor discovery protocol tables for the devices associated with the icons, wherein the characteristics include static information for the devices and the neighbor discovery protocol tables include
15 connection information for the devices.

20. The apparatus of Claim 19 wherein the static information and connection information for the devices is compiled into a build file representing the simulated network.

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21. The apparatus of Claim 17 wherein the devices comprises routers and switches.

22. The apparatus of Claim 19 wherein the static information comprises the device type, the device operating system version and the device interface information.

5 23. The apparatus of Claim 22 wherein the connection information of the neighbor discovery protocol table comprises identification of a neighbor device for an active interface of the device.

24. The apparatus of Claim 20 wherein the build file is text file.

10 25. The apparatus of Claim 24 wherein the build file is for use by a network management simulator to simulate a network.

26. A system for generating a simulated network, the method
15 comprising:
means for receiving a network topology generated at a graphical user interface by a user, wherein the network topology comprises a plurality of devices and at least one connection; and
means for automatically generating a build file describing the simulated
20 network based on the network topology.

27. The system as recited in Claim 26 wherein the means for automatically generating the build file comprises:

means for accessing characteristics for at least one device of the plurality of devices, the characteristics including static information for the device;

- means for accessing a neighbor discovery protocol table for the device,
- 5 the neighbor discovery protocol table including connection information for the device; and

means for compiling the static information and connection information into the build file.

10 28. The system as recited in Claim 26 wherein the plurality of devices comprises routers and switches.

29. The system as recited in Claim 27 wherein the static information comprises the device type, the device operating system version and the device
15 interface information.

30. The system as recited in Claim 29 wherein the connection information of the neighbor discovery protocol table comprises identification of a neighbor device for an active interface of the device.

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31. The system as recited in Claim 26 wherein the build file is text file.